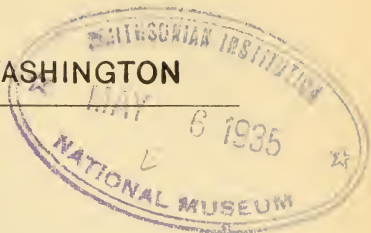


PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON



A FLORIDA SUBSPECIES OF *PSEUDACRIS NIGRITA*
(HYLIDAE).

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Chorophilus verrucosus, described by Cope (1877, p. 87) on the basis of a single specimen from Volusia,¹ Volusia County, Fla., and later reduced by the same author (1889, p. 459) to subspecific rank as *Chorophilus nigrinus verrucosus*, has long remained in oblivion. No author during the past 45 years seems to have accorded it recognition.

The type, said by Cope (1889, p. 459) to have been in his private collection, has just been located among the unidentified material in the collection of the Academy of Natural Sciences of Philadelphia (No. 10773). Its label is not the original one; it bears, besides the name of the Academy and the catalogue number, only the following information: "Cope Collection. Type. Volusia, Florida." In the same jar was an immature *Rana* (No. 10772), likewise labeled as "type" and without a name. Both specimens had been entered in the Academy's bound catalogue under an incomplete generic name and an apparently unpublished specific name bearing no resemblance to *verrucosus*. The two specimens are entirely unlike in size, color, and structure, and the lumping of them together in the catalogue was due to some clerical error.

The type of *verrucosus* is now somewhat shrunken and discolored, but still answers satisfactorily to the original description, which reads, in part, as follows: "Color above leaden, with three longitudinal rows of darker, light edged spots . . . Upper lip dark plumbeous, with a series of five white spots." Cope stressed the tubercular upper surface and the coloration as distinguishing this frog from *C. triseriatus* (Wied). The dorsal and maxillary spots are still distinct.

Some of the original measurements and the present corresponding measurements of the type are, respectively: length, 19, 18 mm.; tibia, 8, 8.5; tarsus, 5, 5; width of head at tympana, 5.5, 5. The whole hind foot

¹ This place, which does not appear on recent maps, was on the east side of the St. John's River, perhaps 5 miles southeast of Lake George.

now measures 12.5. Cope is clearly in error in stating (1889, p. 338) that *verrucosus* differs from *C. nigrilus* (Le Conte) in the somewhat longer tarsus, and from *C. feriarum* (Baird) in the longer hind leg. He records the tarsus of *nigrilus* as 9.4 mm., and the "hind leg" of *feriarum* as 1.77 in. (=45 mm.), as compared with a "hind limb" of 26 mm. in *verrucosus*. The type of *verrucosus* is unquestionably immature.

Before the type was located, examination of a series of 20 Florida specimens in the U. S. National Museum had convinced us of the need of resurrecting this frog under the name of *Pseudacris nigrila verrucosa* (Cope). These specimens are the following: Nos. 85403-85407 and 95797, collected at Paradise Key, Dade County, by M. K. Brady, Jan. 21, 1932; Nos. 85408-85417, collected at Pompano, Broward County, by M. K. Brady, Feb. 22, 1932; Nos. 82576-82579, collected at Sanford, Seminole County, by D. Stoner.

In comparison with two males from Charlton County, Ga. (F. H., Nos. 180-181²), which are probably typical of *P. n. nigrila*, the Florida specimens are distinguished by having the light maxillary stripe broken up and reduced to a few small spots or to a few thin, wavy, oblique or transverse streaks. In one or two specimens it is difficult to discover any vestige of the maxillary stripe. In other forms of the *nigrila* group this stripe is such a distinct and apparently constant character that its obliteration to a large extent in *verrucosa* may be regarded as of considerable taxonomic significance. The arrangement of the dorsal spots is similar to that in *P. n. nigrila*, but the spots apparently tend to be slightly smaller and better separated. The light bars on the hind limbs seem to be generally a little broader than in Georgia specimens. The under parts in general are unspotted, but a few specimens exhibit dark punctulations between the pectoral areolae or along the mandible. Cope states (1877, p. 87) concerning the immature type of *verrucosa* that "The skin of the gular and sternal region is smooth; of the abdomen, areolate." However, areolae are evident on the throat as well as on the breast of the present adults of both sexes. In males of *verrucosa* the throat is yellowish in life and generally clear or unspotted in spirits, whereas in males of *nigrila* the throat is dusky orange in life and dusky in spirits.

The average measurements of seven males (3 from Paradise Key, 4 from Pompano) and the measurements of a single female of *verrucosa* (from Paradise Key) are, respectively, as follows: length, 24.9, 30; tibia, 12.7, 15.5; whole hind foot, 19.5, 25.5; intertympanic width, 6.5, 7.5; elbow to tip of third finger, 10.9, 13; interolecranal extent (distance between elbows when humeri are extended in the same line at right angles to longitudinal axis of body), 15.9, 19; intergenual extent (distance between knees when femora are extended in the same line at right angles to longitudinal axis of body), 22.1, 26. A male of *P. n. nigrila* from Charlton County, Ga. (F. H., No. 180), is slightly larger in every dimension than the maximum for the males of *verrucosa*: length, 29.5; tibia, 14; whole hind foot, 23; intertympanic width, 7.5; elbow to tip of third finger, 12.5; interolecranal extent, 18.5; intergenual extent, 25.

² No. 180 is figured in Nat. Geog. Mag., vol. 65, no. 5, p. 602, 1934.

P. n. verrucosa (for which we suggest the common name of "Florida Chorus Frog") probably ranges over most or all of peninsular Florida south of the fairly well-marked boundary between the Louisianian and the Floridian Faunas (cf. Howell, 1932, pl. 8). This boundary passes near St. Marks, Gainesville, and Jacksonville.

During the evening of February 13, 1917, Harper heard about two of these frogs trilling in the northern part of the "Apopka Saw-grass," in Lake County.

The following field notes are by Brady. "During the night of January 20, 1932, R. F. Deckert and I were collecting in the Royal Palm Hammock, on Paradise Key. In this tropical setting we were surprised to hear the trilling of *Pseudacris* coming from the 'glade' on the west side of the hammock. The call, though possibly a little higher in pitch, was remarkably similar to that of *P. n. feriarum* as heard in the vicinity of Washington, D. C. The chorus was very small and localized. After considerable difficulty we managed to approach the position of the calls and found them coming from depressions and 'potholes' among the limestone rocks and 'glade' vegetation. These depressions contained shallow ponds that were choked with *Isnardia*. Once we had gotten into their immediate vicinity, the frogs became silent, but by running a finger along the teeth of a pocket comb, we were able to imitate the voice sufficiently to induce them to call again. We thus located the males, which occupied well-separated stations and were sitting on projections of the limestone above the water line of the little ponds. The skin of these frogs appeared to be very granular. The dorsal ground color was a metallic gray-green, with the spots showing distinctly at night. When exposed to daylight, the frogs became very much darker.

"In addition to a series of six calling males, we took a pair in amplexus. The female deposited 160 eggs, a few separately, but the majority in a loose mass not differing from the egg mass of *feriarum*. The brown and white eggs resembled those of *feriarum*, but seemed somewhat smaller, the vitellus measuring less than .5 mm. The single envelope measured 1.5-2 mm. Development was very rapid and hatching took place within 60 hours.

"A month later we encountered another *Pseudacris* chorus a few miles west of Pompano, in Broward County. The voice seemed identical with that of our first chorus but the frogs were found under different conditions, in shallow ditches and in depressions in open fields. Several other frogs, including *Pseudacris ocularis* (Holbrook), were singing at the same time."

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